









EROSION AND SEDIMENT CONTROL STANDARD NOTES:

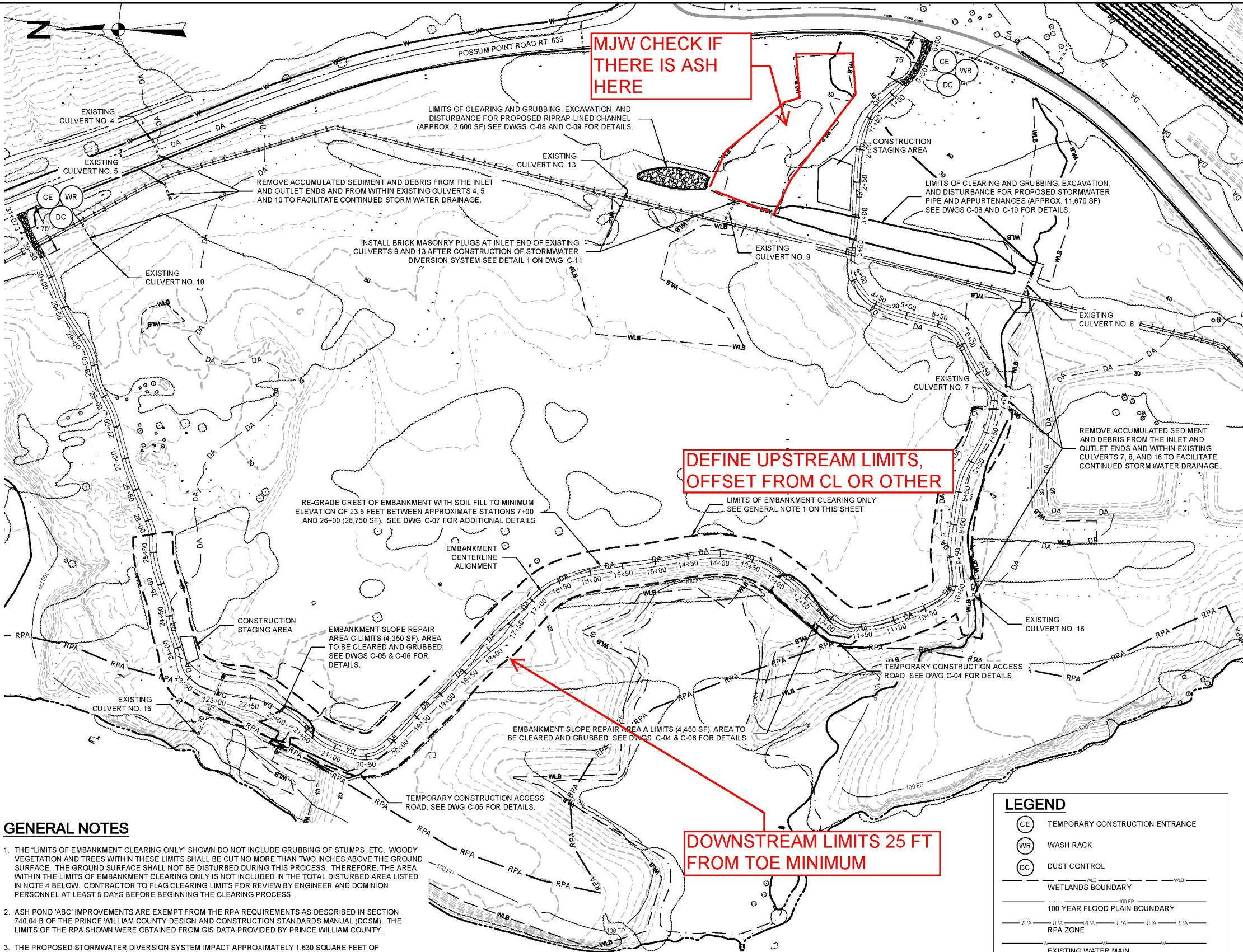
1. THE OWNER/DEVELOPER MUST NOTIFY THE DEPARTMENT OF PUBLIC WORKS AT 703-792-7070 AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH APPLICABLE COUNTY ORDINANCES AND POLICES.
2. THE OWNER/DEVELOPER GRANTS THE RIGHT-OF-ENTRY ON TO THIS PROPERTY TO THE DESIGNATED PRINCE WILLIAM COUNTY PERSONNEL FOR THE PURPOSES OF INSPECTING AND MONITORING FOR COMPLIANCE WITH TITLE 10.01, CHAPTER 5, ARTICLE 4 OF THE CODE OF VIRGINIA, EROSION AND SEDIMENT CONTROL LAW AND THE DESIGN AND CONSTRUCTION STANDARDS MANUAL SECTION 750.04 (C).
3. ALL EROSION CONTROL MEASURES SHOWN ON THE APPROVED PLAN MUST BE IN PLACE AND INSPECTED AND APPROVED BY THE DEPARTMENT OF PUBLIC WORKS PRIOR TO CLEARING, STRIPPING OF TOPSOIL OR GRADING.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE KEPT ON THE SITE AT ALL TIMES.
5. THE OWNER/DEVELOPER'S REPRESENTATIVE IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY PRINCE WILLIAM COUNTY.
6. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL COMPLETE AND ADEQUATE STABILIZATION IS ACHIEVED.
7. WATER MUST BE PUMPED INTO AN APPROVED FILTERING DEVICE DURING DEWATERING OPERATIONS.
8. ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS AND TO THE PRINCE WILLIAM COUNTY DESIGN AND CONSTRUCTION STANDARDS MANUAL.
- THE OWNER/DEVELOPER'S REPRESENTATIVE WILL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICE AT ALL TIMES.
9. THE OWNER/DEVELOPER'S REPRESENTATIVE SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:
  - a. GRAVEL OUTLETS WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE. IF THE GRAVEL IS CLOGGED BY SEDIMENT, IT SHALL BE REMOVED AND CLEANED OR REPLACED.
  - b. SILT FENCE BARRIERS WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
  - c. SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEED AS NEEDED.
  - d. STREAM DIVERSION AND STORM CONVEYANCE, CHANNELS SHALL BE INSPECTED DAILY AND AFTER EACH RAIN TO ENSURE THEY'RE FUNCTIONING PROPERLY AND THAT THE INTEGRITY OF THE LININGS ARE NOT IMPAIRED.ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES MUST BE MADE **IMMEDIATELY** AFTER THE INSPECTION.
10. PERMANENT SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.

TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN FOURTEEN (14) DAYS.

SEEDING AND SELECTION OF THE SEED MIXTURE SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK STANDARD AND SPECIFICATION 3.32.
11. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WILL BE REMOVED WITHIN 30 DAYS AFTER ADEQUATE SITE STABILIZATION AND AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, AS AUTHORIZED BY THE PRINCE WILLIAM COUNTY INSPECTORS. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES WILL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
12. WHEN SEDIMENT IS TRANSPORTED ONTO A PAVED ROAD SURFACE, THE ROAD WILL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT WILL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING WILL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
13. AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.
14. RPA AND FLOOD PLAIN LIMITS SHALL BE CLEARLY MARKED IN THE FIELD BY FLAGS, SIGNS, ETC.
15. TREE SAVE AREAS SHALL BE CLEARLY MARKED IN THE FIELD BY ORANGE SAFETY FENCE. APPROPRIATE TREE PRESERVATION SIGNS (WATERPROOF) TO IDENTIFY TREE PRESERVATION AREAS SHALL BE LOCATED ON TREE PROTECTIONS FENCING (INCLUDES SUPER SILT FENCING) AND SHOULD ALTERNATE BETWEEN ENGLISH AND SPANISH EVERY 30 FEET.

GENERAL NOTES

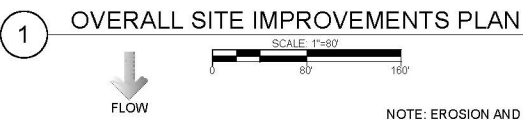
1. THE "LIMITS OF EMBANKMENT CLEARING ONLY" SHOWN DO NOT INCLUDE GRUBBING OF STUMPS, ETC. WOODY VEGETATION AND TREES WITHIN THESE LIMITS SHALL BE CUT NO MORE THAN TWO INCHES ABOVE THE GROUND SURFACE. THE GROUND SURFACE SHALL NOT BE DISTURBED DURING THIS PROCESS. THEREFORE, THE AREA WITHIN THE LIMITS OF EMBANKMENT CLEARING ONLY IS NOT INCLUDED IN THE TOTAL DISTURBED AREA LISTED IN NOTE 4 BELOW. CONTRACTOR TO FLAG CLEARING LIMITS FOR REVIEW BY ENGINEER AND DOMINION PERSONNEL AT LEAST 5 DAYS BEFORE BEGINNING THE CLEARING PROCESS.
2. ASH POND 'ABC' IMPROVEMENTS ARE EXEMPT FROM THE RPA REQUIREMENTS AS DESCRIBED IN SECTION 740.04.B OF THE PRINCE WILLIAM COUNTY DESIGN AND CONSTRUCTION STANDARDS MANUAL (DCSM). THE LIMITS OF THE RPA SHOWN WERE OBTAINED FROM GIS DATA PROVIDED BY PRINCE WILLIAM COUNTY.
3. THE PROPOSED STORMWATER DIVERSION SYSTEM IMPACT APPROXIMATELY 1,630 SQUARE FEET OF WETLANDS. THE PROPOSED EMBANKMENT SLOPE REPAIRS IMPACT APPROXIMATELY 230 SQUARE FEET OF WETLANDS. THE WETLANDS BOUNDARY SHOWN WAS DELINEATED BY GAI CONSULTANTS, INC. ON MAY 22, 2014. A PRELIMINARY JURISDICTIONAL DETERMINATION FOR THIS WETLANDS BOUNDARY WAS ISSUED BY THE USACE NORFOLK DISTRICT ON .
4. THE PLANNED IMPROVEMENTS WILL OCCUR ON DOMINION'S PROPERTY. THE PROJECT PARCEL GPIN IS 8288-96-2368. THE TOTAL PROJECT SITE AREA IS 27.7 ACRES. THE TOTAL DISTURBED AREA WILL NOT EXCEED 2.3 ACRES.
5. ASH POND 'ABC' IS ZONED AS M-1 HEAVY INDUSTRIAL.
6. THE PROJECT SITE AREA IS LOCATED IN PRINCE WILLIAM COUNTY TRAFFIC ANALYSIS ZONE 2808H. THE INFORMATION PUBLISHED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) IN 2013 INDICATES THAT POSSUM POINT ROAD HAS AN ANNUAL AVERAGE DAILY TRAFFIC VOLUME (AADT) OF 400.



MJW CHECK IF THERE IS ASH HERE

DEFINE UPSTREAM LIMITS, OFFSET FROM CL OR OTHER

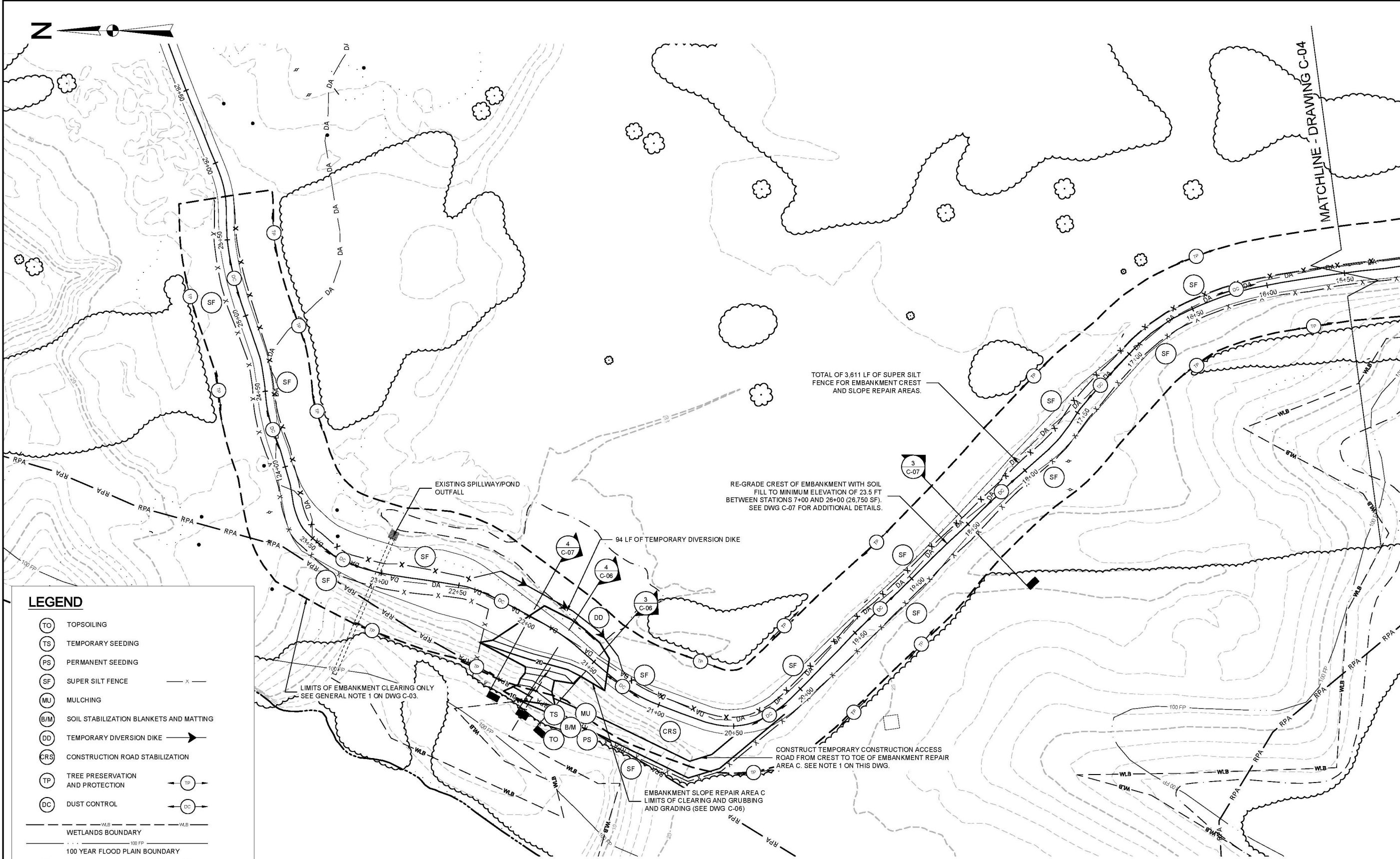
DOWNSTREAM LIMITS 25 FT FROM TOE MINIMUM



NOTE: EROSION AND SEDIMENT CONTROL MEASURES FOR EMBANKMENT REPAIRS ARE SHOWN ON DWGS C-04 AND C-05. EROSION AND SEDIMENT CONTROL MEASURES FOR STORMWATER DIVERSION SYSTEM ARE SHOWN ON DWGS C-08 THROUGH C-10.

DESIGNED BY: SEP	CHECKED BY: SEP	DATE: _____	REV	DESCRIPTION
JONATHAN M. PITTMAN, P.E.			VIRGINIA PROFESSIONAL ENGINEER 04120	
<b>Schnabel</b> ENGINEERING				
DOMINION POSSUM POINT ASH POND ABC DOMINION RESOURCES SERVICES, INC PRINCE WILLIAM COUNTY, VIRGINIA				
OVERALL SITE IMPROVEMENTS PLAN				
PROJECT: 14221002.00				
DATE: OCTOBER 2014				
DRAWING NO. C-03				
SHEET 5 OF 16				





**LEGEND**

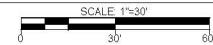
- (TO) TOPSOILING
- (TS) TEMPORARY SEEDING
- (PS) PERMANENT SEEDING
- (SF) SUPER SILT FENCE
- (MU) MULCHING
- (B/M) SOIL STABILIZATION BLANKETS AND MATTING
- (DD) TEMPORARY DIVERSION DIKE
- (CRS) CONSTRUCTION ROAD STABILIZATION
- (TP) TREE PRESERVATION AND PROTECTION
- (DC) DUST CONTROL
- WLB WETLANDS BOUNDARY
- 100 FP 100 YEAR FLOOD PLAIN BOUNDARY
- RPA RPA ZONE
- W EXISTING WATER MAIN
- DA LIMITS OF CLEARING ONLY
- DA DRAINAGE AREA DIVIDE
- LIMITS OF CLEARING AND GRUBBING/DISTURBANCE



FLOW

1

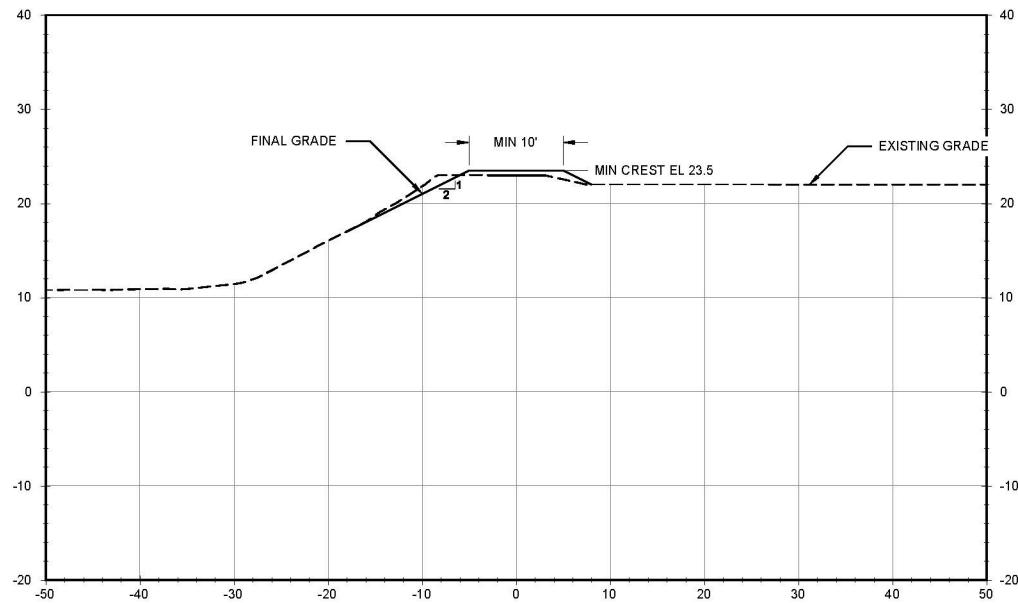
**EMBANKMENT CLEARING AND GRADING PLAN**



**NOTES:**

1. UPON COMPLETION OF CONSTRUCTION, RESTORE AREA FOR TEMPORARY CONSTRUCTION ACCESS ROAD TO MATCH PREVIOUS GRADES. PLACE TOPSOIL, MULCH, AND PERMANENT SEEDING ON ALL DISTURBED AREAS.

DESIGNED BY: SEP		CHECKED BY: JUMP		DATE: _____	
DESIGNED BY: SEP		CHECKED BY: JUMP		DATE: _____	
JONATHAN M. PITTMAN, P.E. VIRGINIA PROFESSIONAL ENGINEER 04120					
Schnabel ENGINEERING 11A Oak Branch Drive / Greensboro, NC / 27407 T: 336-274-8498 F: 336-274-9888 / schnabel-eng.com					
DOMINION POSSUM POINT ASH POND ABC DOMINION RESOURCES SERVICES, INC PRINCE WILLIAM COUNTY, VIRGINIA					
EMBANKMENT CLEARING AND GRADING PLAN - SHEET 2					
PROJECT: 14221002.00					
DATE: OCTOBER 2014					
DRAWING NO. C-05					
SHEET 7 OF 16					

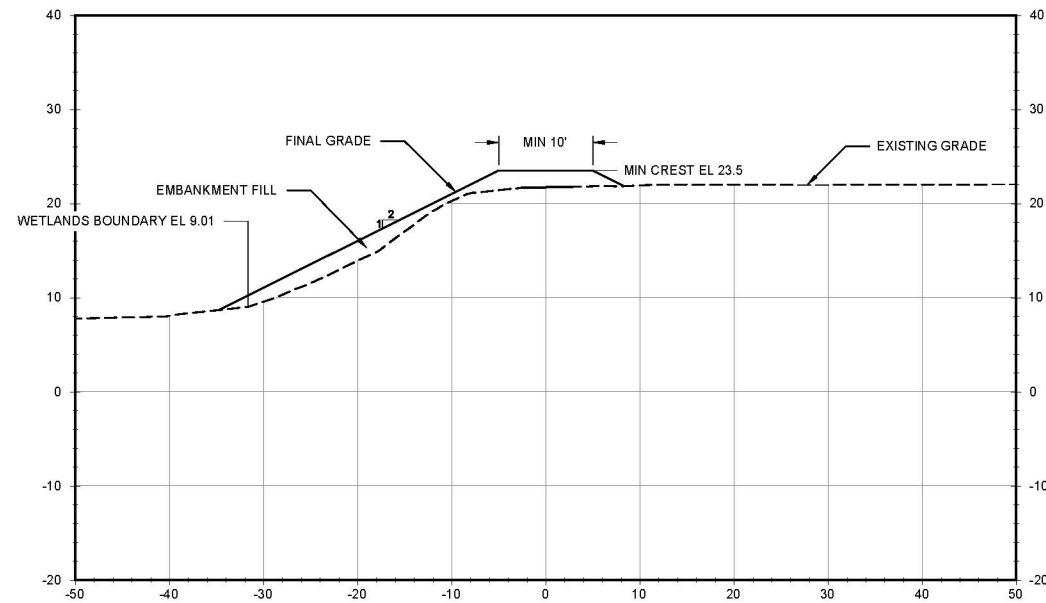


1  
C-04

EMBAKMENT SLOPE REPAIR AREA A - STA - 12+00

SCALE: 1"=10'

0 10' 20'



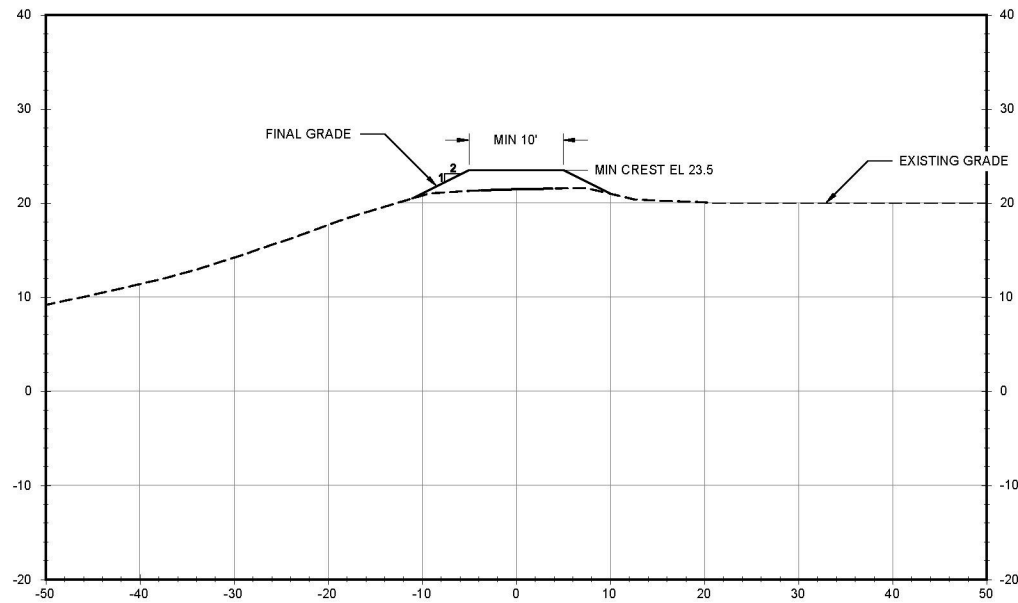
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C-04

EMBAKMENT SLOPE REPAIR AREA A - STA 12+50

SCALE: 1"=10'

0 10' 20'

SHOW A SECTION AT ABOUT 12+25 TO  
SHOW MAX EROSION

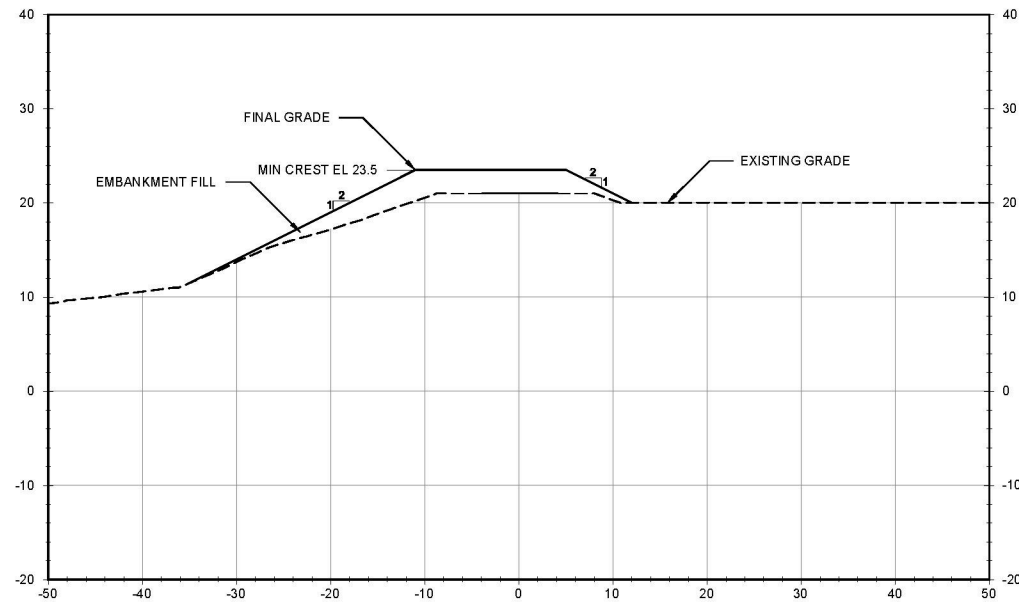


3  
C-05

EMBAKMENT SLOPE REPAIR AREA C - STA 21+50

SCALE: 1"=10'

0 10' 20'



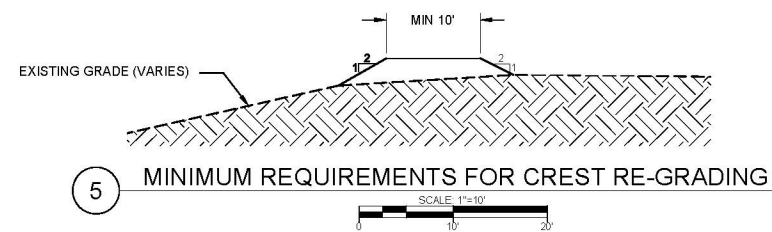
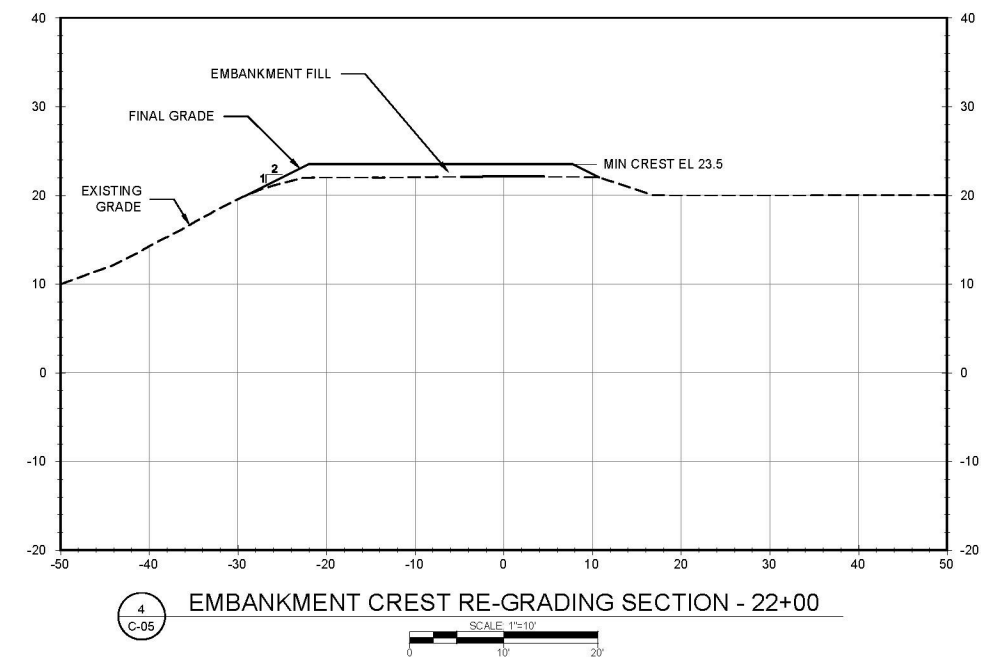
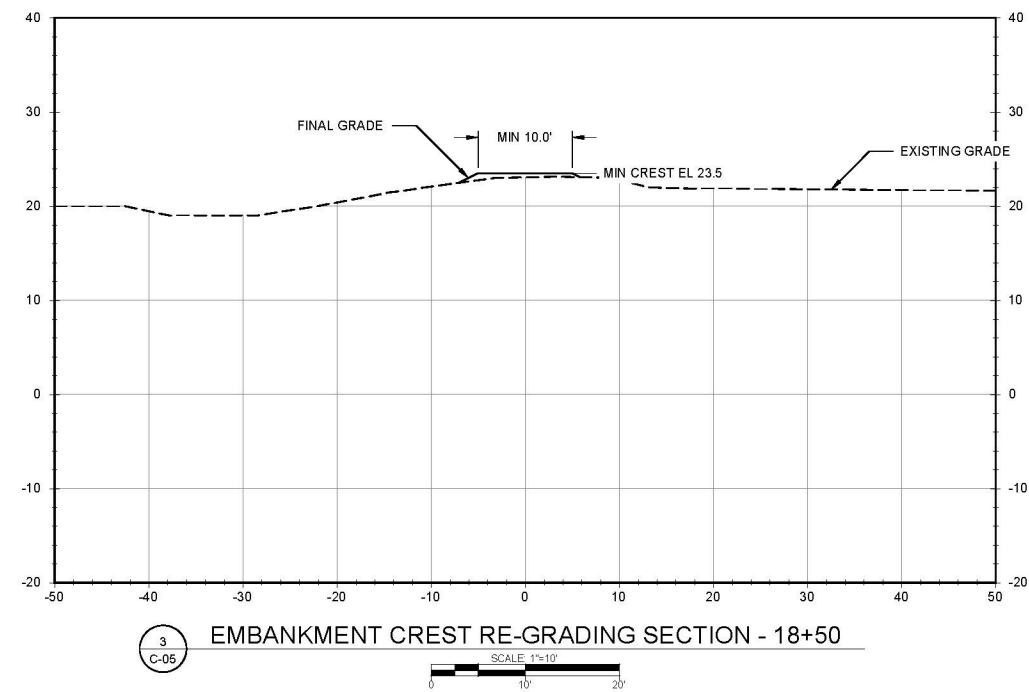
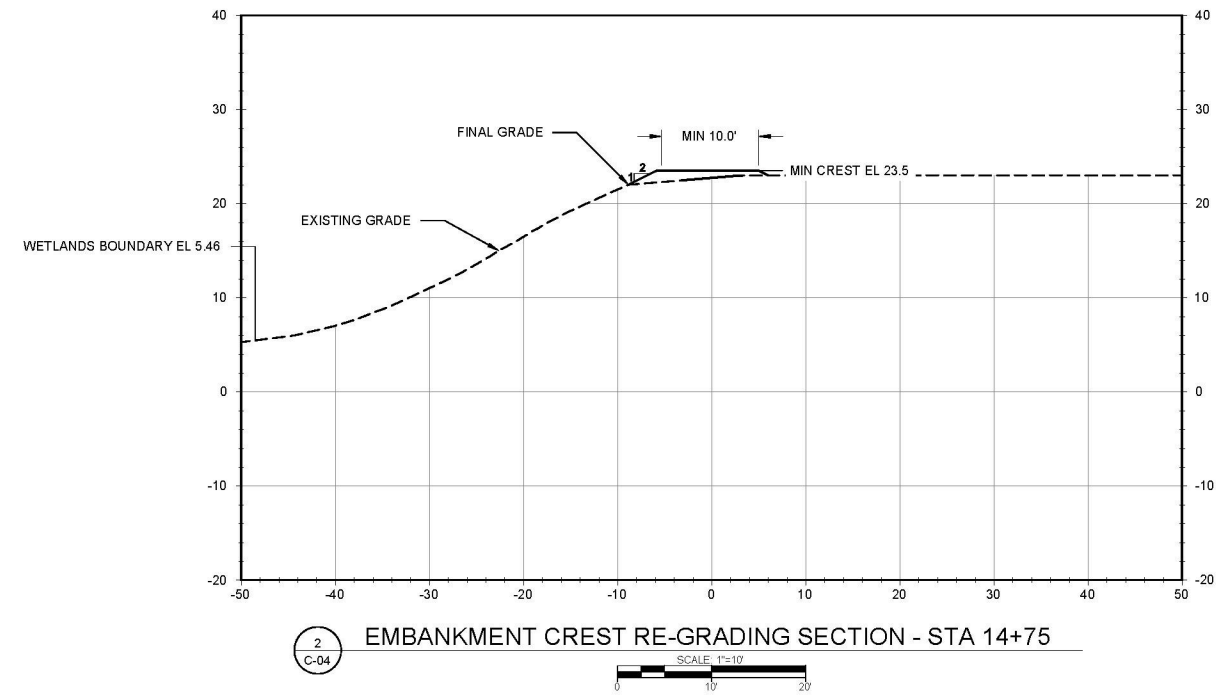
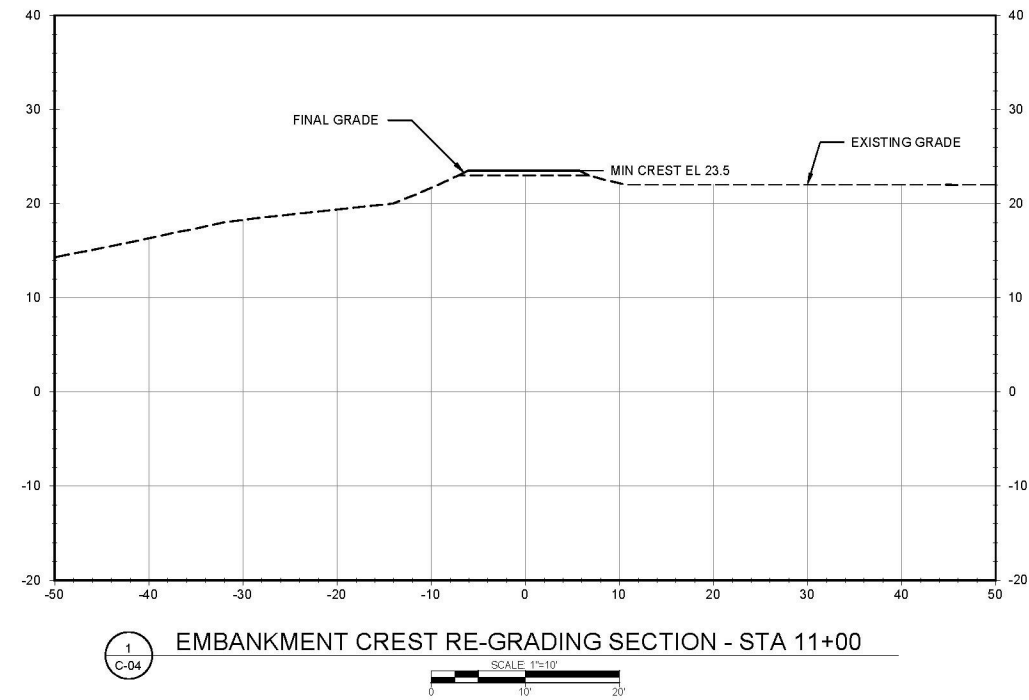
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C-05


EMBAKMENT SLOPE REPAIR AREA C - STA 21+75

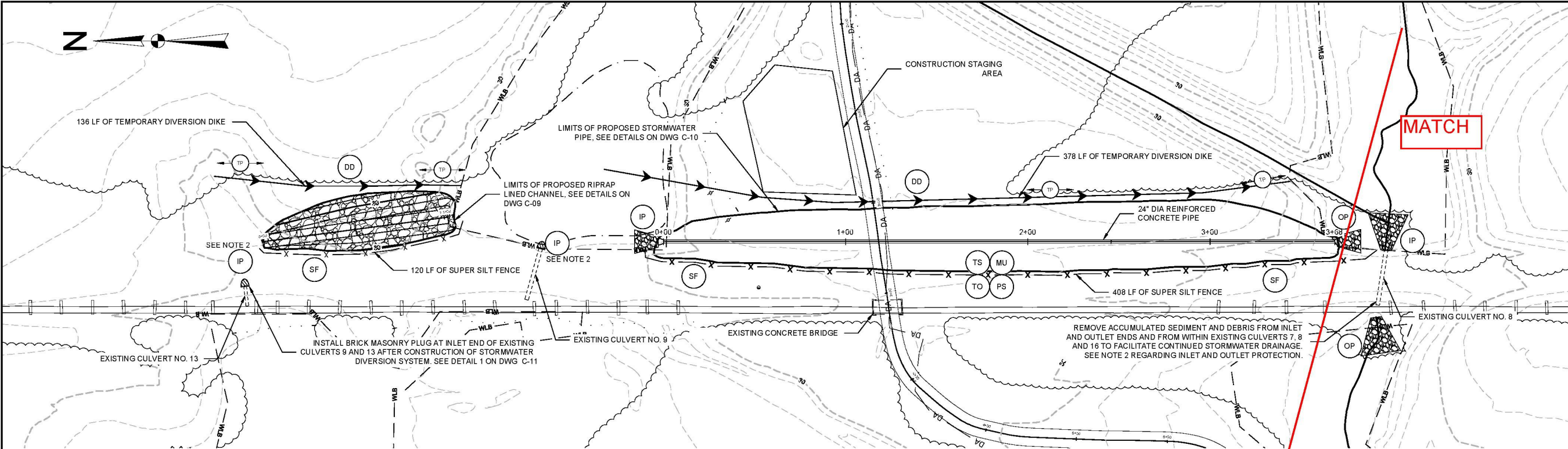
SCALE: 1"=10'

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DESIGNED BY: SEP		CREATED BY: JMP	JONATHAN M. PITTMAN, P.E. DATE: _____ VIRGINIA PROFESSIONAL ENGINEER 04120	REV	DESCRIPTION	DATE
DRAWN BY: SEP						
 11A Oak Branch Drive / Greensboro, NC / 27407 T/ 336-274-8498 F/ 336-274-9886 / schnabel-eng.com						
DOMINION POSSUM POINT ASH POND ABC DOMINION RESOURCES SERVICES, INC PRINCE WILLIAM COUNTY, VIRGINIA				EMBAKMENT SLOPE REPAIR SECTIONS - AREAS A AND C		
 DOMINION RESOURCES SERVICES, INC CLIENT: ALLEN, VIRGINIA				PROJECT: 14221002.00 DATE: OCTOBER 2014 DRAWING NO. C-06 SHEET 8 OF 16		

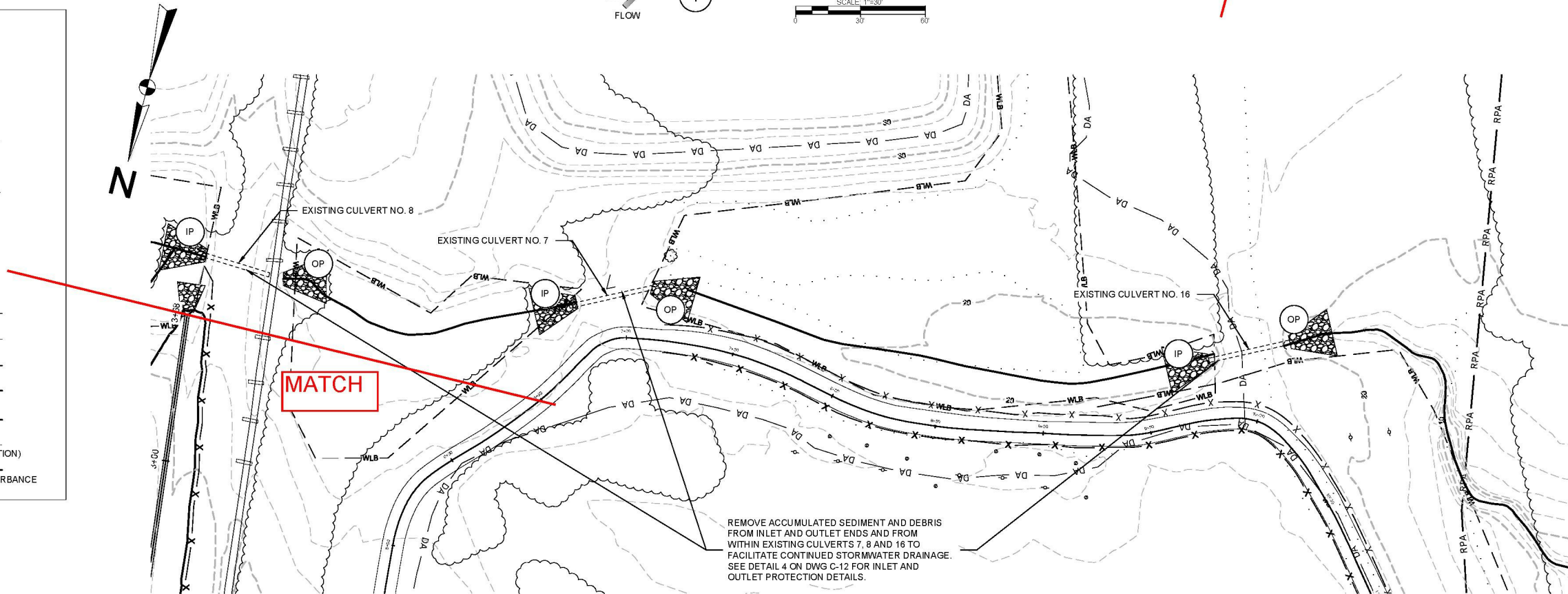


 DOMINION RESOURCE SERVICES, INC. GREEN VALLEY, VIRGINIA	PROJECT: 14221002.00								
	DATE: OCTOBER 2014								
	DRAWING NO.								
	C-07								
	SHEET								
	9 OF 16								
DOMINION POSSUM POINT ASH POND ABC DOMINION RESOURCE SERVICES, INC. PRINCE WILLIAM COUNTY, VIRGINIA			 <b>Schnabel</b> ENGINEERING						
EMBANKMENT CREST RE-GRADING SECTIONS						11A Oak Branch Drive / Greensboro, NC / 27407 T/ 336-274-5456 F/ 336-274-5486 / <a href="http://schnabel-eng.com">schnabel-eng.com</a>			
						DESIGNED BY:	DRAWN BY:	CHECKED BY:	
						SEP	SEP	JMP	
						JONATHAN M. PITTMAN, P.E.			
						DATE: _____			
						VIRGINIA PROFESSIONAL ENGINEER 041420			
						REV	DESCRIPTION		DATE



1 STORMWATER DIVERSION PLAN  
SCALE: 1"=30'

LEGEND	
(TO)	TOPSOILING
(TS)	TEMPORARY SEEDING
(PS)	PERMANENT SEEDING
(SF)	SUPER SILT FENCE
(MU)	MULCHING
(DD)	TEMPORARY DIVERSION DIKE
(TP)	TREE PRESERVATION AND PROTECTION
(IP)	INLET PROTECTION
(OP)	OUTLET PROTECTION
WLB	WETLANDS BOUNDARY
100 FP	100 YEAR FLOOD PLAIN BOUNDARY
13°A	RPA ZONE
W	EXISTING WATER MAIN
DA	LIMITS OF CLEARING ONLY
DA	DRAINAGE AREA DIVIDE (POST-CONSTRUCTION)
DA	LIMITS OF CLEARING AND GRUBBING/DISTURBANCE



2 STORMWATER DIVERSION PLAN  
SCALE: 1"=30'

- NOTES:
1. PLACE TOPSOIL, MULCH, AND PERMANENT SEEDING ON ALL DISTURBED AREAS UPON COMPLETION OF CONSTRUCTION.
  2. INSTALL TEMPORARY SILT FENCE INLET PROTECTION AT EXISTING CULVERTS 9 AND 13. INSTALL PERMANENT RIPRAP INLET AND OUTLET PROTECTION AT EXISTING CULVERTS 7, 8, AND 16 IN ACCORDANCE WITH DETAIL 4 ON DWG C-12.
  3. AS SHOWN ON DWG C-03, ALSO REMOVE ACCUMULATED SEDIMENT AND DEBRIS FROM INLET AND OUTLET ENDS AND FROM WITHIN EXISTING CULVERTS 4, 5, AND 10 TO FACILITATE CONTINUED STORMWATER DRAINAGE ON NORTH SIDE OF POND.

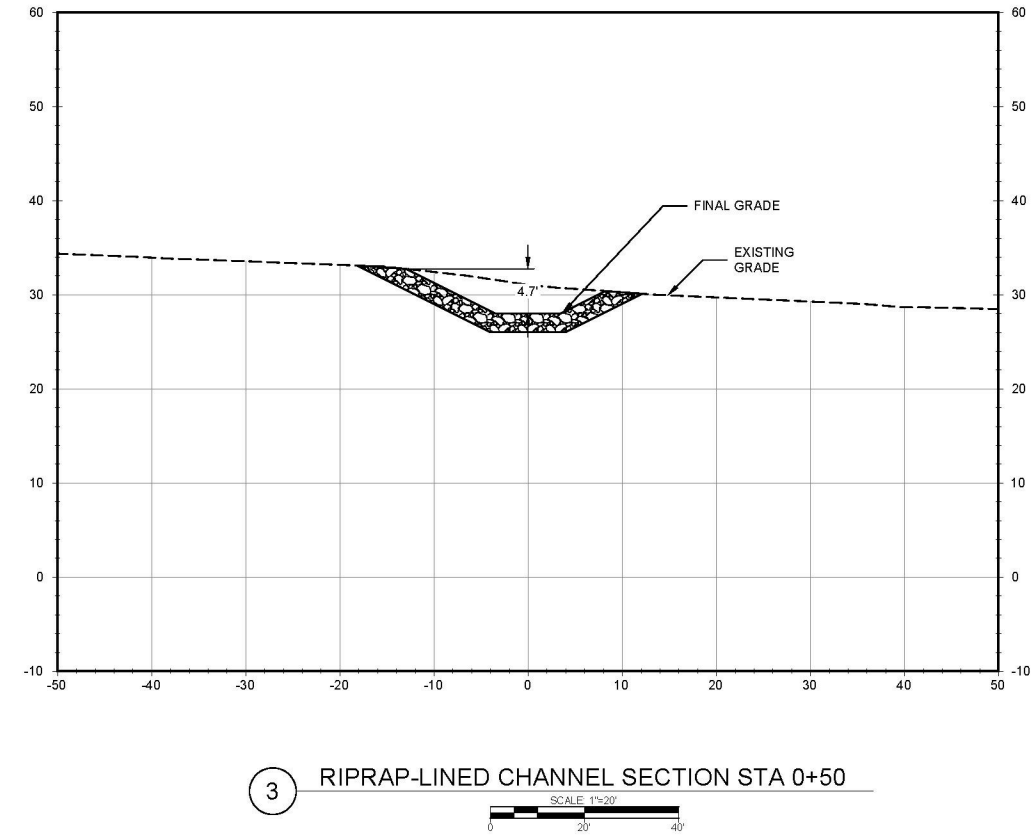
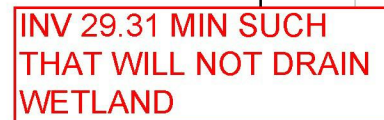
DESIGNED BY: SEP	DRAWN BY: SEP	CHECKED BY: JMP	DATE: _____
JONATHAN M. PITTMAN, P.E.			VIRGINIA PROFESSIONAL ENGINEER 04120
Schnabel ENGINEERING			11A Oak Branch Drive / Greensboro, NC / 27407 T: 336-274-8498 F: 336-274-9888 / schnabel-eng.com
DOMINION POSSUM POINT ASH POND ABC DOMINION RESOURCES SERVICES, INC PRINCE WILLIAM COUNTY, VIRGINIA			OVERALL STORMWATER DIVERSION SYSTEM PLAN
PROJECT: 14221002.00			DATE: OCTOBER 2014
DRAWING NO. C-08			SHEET 10 OF 16

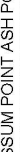

	TOPSOILING	
	TEMPORARY SEEDING	
	PERMANENT SEEDING	
	SUPER SILT FENCE	
	MULCHING	
	TEMPORARY DIVERSION DIKE	
	TREE PRESERVATION AND PROTECTION	
	INLET PROTECTION	
	OUTLET PROTECTION	

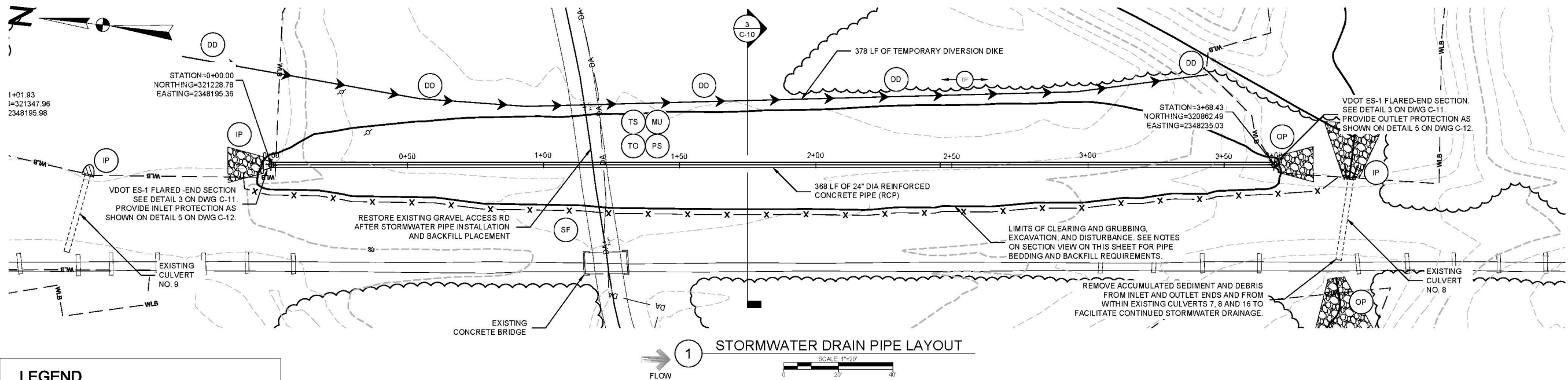
  

	WETLANDS BOUNDARY
	100 YEAR FLOOD PLAIN BOUNDARY
	RPA ZONE
	EXISTING WATER MAIN
	LIMITS OF CLEARING ONLY
	DRAINAGE AREA DIV/DE (POST-CONSTRUCTION)

LIMITS OF CLEARING AND GRUBBING/DISTURBANCE

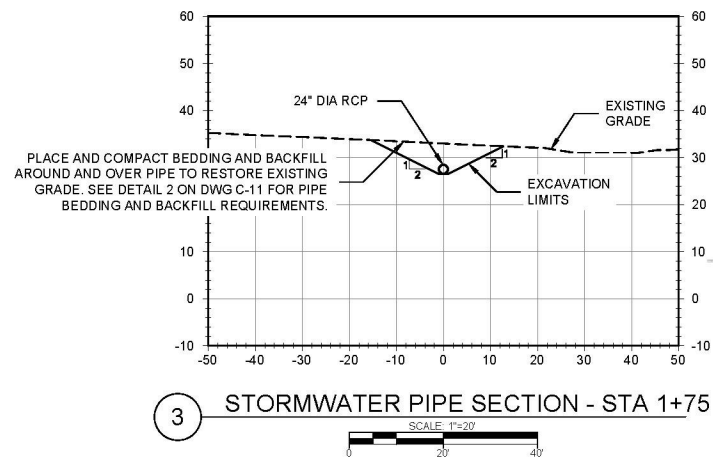
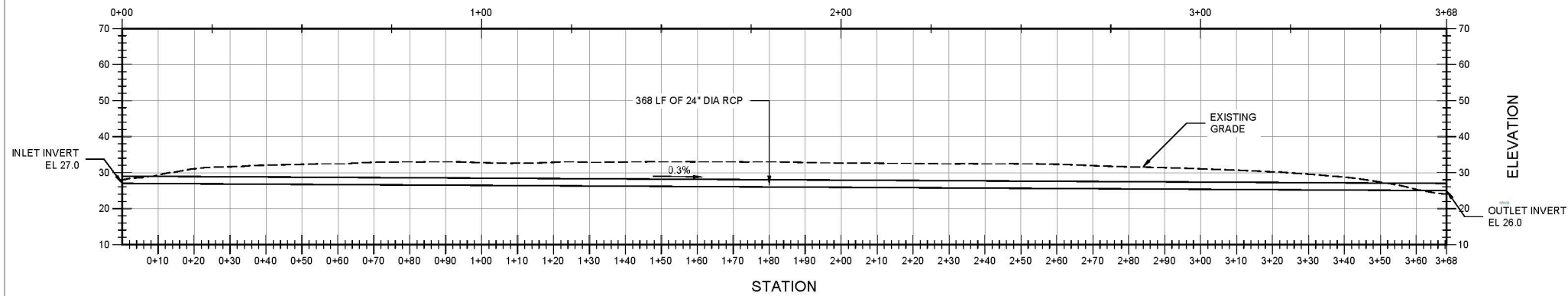


 <div>Dominion</div>	DOMINION POSSUM POINT ASH POND ABC DOMINION RESOURCES SERVICES, INC PRINCE WILLIAM COUNTY, VIRGINIA		 <div><b>Schnabel</b> ENGINEERING</div>	11A Oak Branch Drive / Greensboro, NC / 27407 Tel: 336-274-9456 / Fax: 336-274-9498 / <a href="mailto:info@schnabel-eng.com">info@schnabel-eng.com</a>	DESIGNED BY: SEP	DRAWN BY: SEP	CHECKED BY: JMP	
PROJECT: 14221002.00		DATE: OCTOBER 2014		DRAWING NO. C-09		SHEET 11 OF 16		
DOMINION RESOURCE SERVICES, INC. GLEN ALLEN, VIRGINIA		STORMWATER DIVERSION SYSTEM - RIPRAP-LINED CHANNEL DETAILS		JONATHAN M. PITTMAN, P.E.		DATE: _____ VIRGINIA PROFESSIONAL ENGINEER 041420		DESCRIPTION
								REV

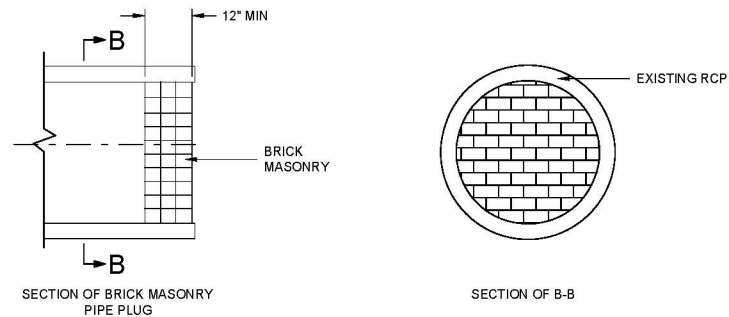


# LEGEND

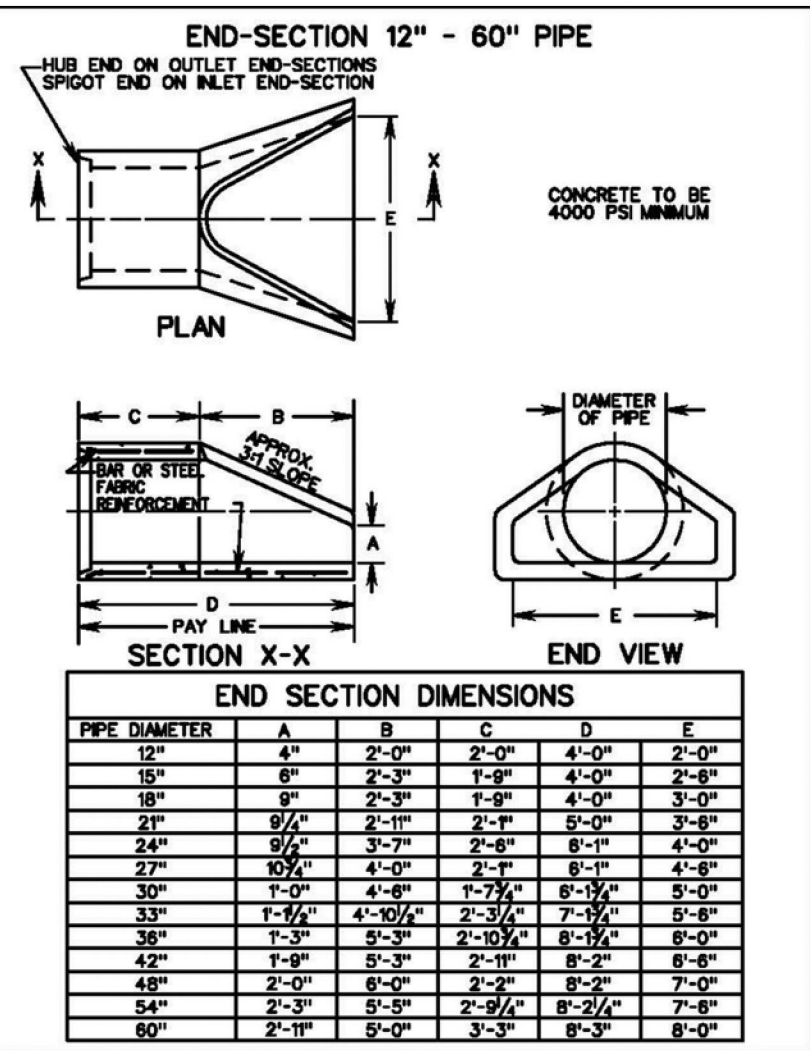
- (TO) TOPSOILING
- (TS) TEMPORARY SEEDING
- (PS) PERMANENT SEEDING
- (SF) SUPER SILT FENCE
- (MU) MULCHING
- (DD) TEMPORARY DIVERSION DIKE
- (TP) TREE PRESERVATION AND PROTECTION
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- WLB WETLANDS BOUNDARY
- 100 FP 100 YEAR FLOOD PLAIN BOUNDARY
- RPA RPA ZONE
- W EXISTING WATER MAIN
- DA LIMITS OF CLEARING ONLY
- DA DRAINAGE AREA DIVIDE (POST-CONSTRUCTION)
- LIMITS OF CLEARING AND GRUBBING/DISTURBANCE



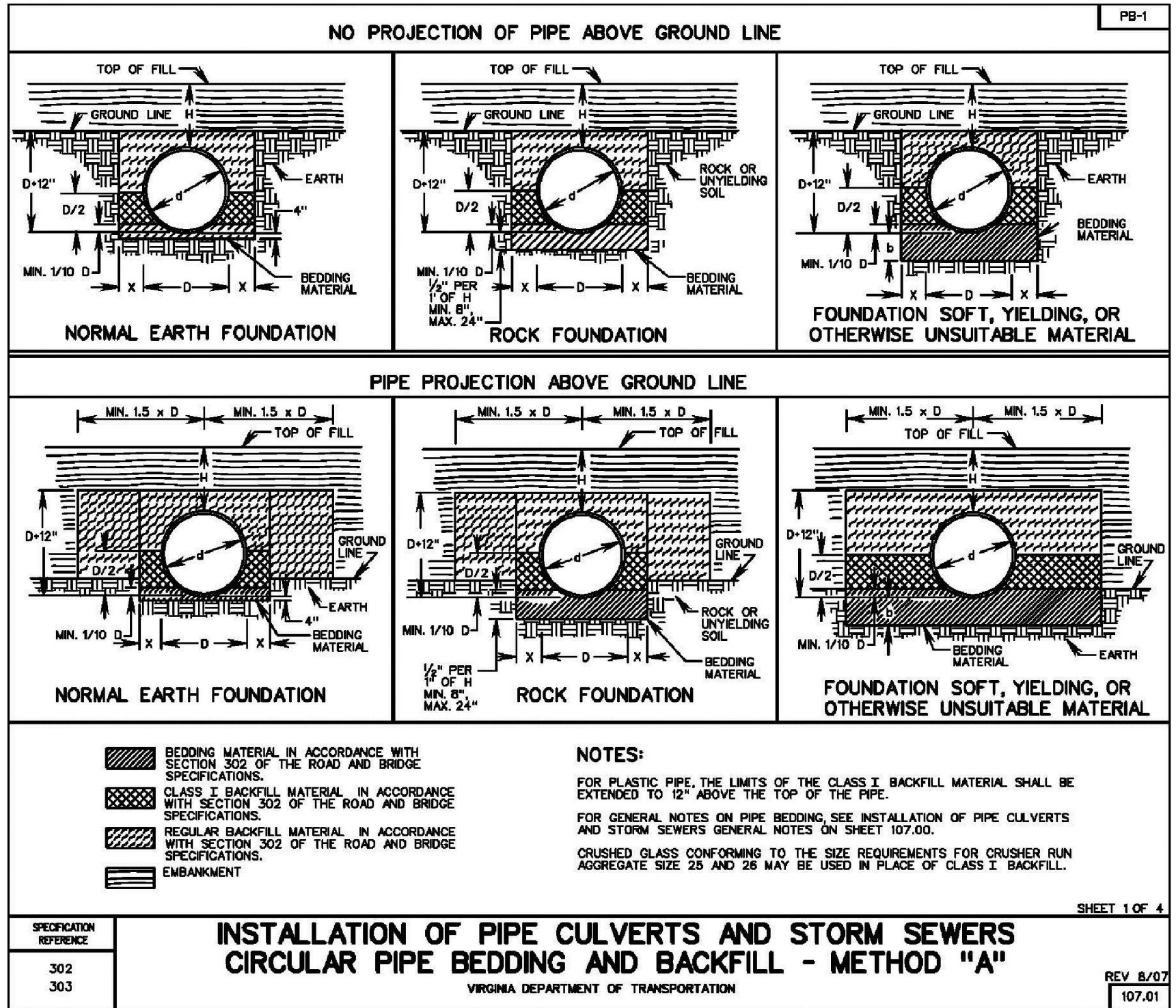
DESIGNED BY: SEP DRAWN BY: SEP CHECKED BY: JMP		DATE: _____ JONATHAN M. PITTMAN, P.E. VIRGINIA PROFESSIONAL ENGINEER 04120
DOMINION POSSUM POINT ASH POND ABC DOMINION RESOURCES SERVICES, INC PRINCE WILLIAM COUNTY, VIRGINIA		
<b>STORMWATER DIVERSION SYSTEM - STORMWATER PIPE DETAILS</b>		
DOMINION RESOURCES SERVICES, INC CLIENT: ALLEN, VIRGINIA		
PROJECT: 14221002.00 DATE: OCTOBER 2014 DRAWING NO. C-10 SHEET 12 OF 16		



1 BRICK MASONRY PLUG FOR EXISTING CULVERTS 9 AND 13  
VDOT ROAD AND BRIDGE STANDARDS SPECIFICATION 107.23 NOT TO SCALE



3 STORMWATER PIPE FLARED END SECTIONS  
VDOT ROAD AND BRIDGE STANDARDS SPECIFICATION 302-102.01 NOT TO SCALE




2 PIPE BEDDING AND BACKFILL REQUIREMENTS FOR STORMWATER PIPE  
NOT TO SCALE

DESIGNED BY SEP	CHECKED BY JMP	DATE	DESCRIPTION
DESIGNED BY SEP	CHECKED BY SEP	DATE	DESCRIPTION
JONATHAN M. PITTMAN, P.E.		VIRGINIA PROFESSIONAL ENGINEER 04120	
Schnabel Engineering		11A Oak Branch Drive / Greensboro, NC / 27407 T/ 336-274-8498 F/ 336-274-9880 / schnabel-eng.com	
DOMINION POSSUM POINT ASH POND ABC DOMINION RESOURCES SERVICES, INC. PRINCE WILLIAM COUNTY, VIRGINIA		STORMWATER DIVERSION SYSTEM DETAILS	
PROJECT: 14221002.00 DATE: OCTOBER 2014 DRAWING NO. C-11 SHEET 13 OF 16		DOMINION DOMINION RESOURCE SERVICES, INC. CLINT ALLEN, VIRGINIA	







**PRINCE WILLIAM COUNTY**  
 Department of Public Works – Land Use Planning Division  
**UNIT PRICE LIST**  
 (Performance-Based, Landscaping, Erosion Control, Stormwater & Erosion Control Features)  
 Revisited: November 17, 2014  
 in effect: September 15, 2018

Project Name: Domestic Building Park Phase Selection, Ash Pond, ABC, Topographic  
 Project #: \_\_\_\_\_ Date Prepared: October 16, 2014

NOTE: This form is to be used to estimate performance based landscaping and erosion control quantities presented with this Plan. Prices shown: These prices do not include items that are to be provided separately, such as: Landscaping, Erosion Control, Stormwater & Erosion Control Features.

**1. SOILIZATION/DEMOLITION OF EXISTING CONSTRUCTION EQUIPMENT**

1 @ Lump Sum \$400,000.00 (item)  
**\$20,000**

**2. STORM DRAINAGE**

A. Structures	Item	Price	Cost
	D6-1	@ \$1,500 EA	
	D6-1	@ \$1,500 EA	
	M6-1	@ \$2,500 EA	
	M6-2	@ \$1,500 EA	
	D6-3	@ \$1,500 EA	
	D6-7	@ \$1,500 EA	
	D6-12	@ \$1,500 EA	
		<b>Subtotal:</b>	

B. Concrete Pipe	Item	Price	Cost
Quantity			
17'0"	@ \$15.13		
17'0"	@ \$40.13		
21'0"	@ \$41.13		
21'0"	@ \$50.13		
30'0"	@ \$50.13		
30'0"	@ \$60.13		
30'0"	@ \$71.13		
30'0"	@ \$80.13		
30'0"	@ \$91.13		
48'0"	@ \$12.13		
48'0"	@ \$100.13		
60'0"	@ \$27.13		
60'0"	@ \$275.13		
60'0"	@ \$27.13		
	<b>Subtotal:</b>		<b>\$20,350</b>

Subtotal for this page: **\$40,350**

Checked By: \_\_\_\_\_  
 Land Development Division / Erosion Control Unit

Page 9 of 9  
 10/16/14  
 10/16/14

Revised For this page: \_\_\_\_\_  
 10/16/14  
 10/16/14

C. End Wallis		Item	Price	Cost
Quantity	1270		@ \$700 EA	
	1570		@ \$830 EA	
	1870		@ \$860 EA	
	2170		@ \$1,100 EA	
	2770		@ \$1,300 EA	
	2770		@ \$1,350 EA	
	3070		@ \$1,750 EA	
	1170		@ \$1,900 EA	
	3070		@ \$2,100 EA	
	4270		@ \$2,500 EA	
	4870		@ \$2,600 EA	
	5070		@ \$2,600 EA	
	6070		@ \$1,600 EA	
	6670		@ \$2,600 EA	
	7270		@ \$4,500 EA	
		Subtotal:		
D. End Sections (ES-1)				
Quantity	Item	Price	Cost	
1270		@ \$600 EA		
1570		@ \$630 EA		
1870		@ \$700 EA		
2170		@ \$750 EA		
2770		@ \$800 EA		
3070		@ \$850 EA		
3070		@ \$1,000 EA		
3070		@ \$1,150 EA		
3070		@ \$1,300 EA		
	Subtotal:		\$1,600	
E. Corrugated Metal Pipe				
Quantity	Item	Price	Cost	
1270		@ \$19 EA		
1570		@ \$22 EA		
1870		@ \$25 EA		
2180		@ \$27 EA		
3070		@ \$34 EA		
3070		@ \$35 EA		
4270		@ \$59 EA		
4870		@ \$71 EA		
5070		@ \$73 EA		
6070		@ \$12 EA		
	Subtotal:			
Subtotal for all items: \$1,600				

Elmer Price Inc.

10000 20th Avenue, Suite 200, Golden, Colorado 80401

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F. Fand Section (F-2.5)			
Quantity	Item	Price	Cost
1750		@ \$500 EA	
1870		@ \$550 EA	
2470		@ \$460 EA	
3070		@ \$450 EA	
3670		@ \$490 EA	
4270		@ \$51,000 EA	
4870		@ \$7,300 EA	
	<b>Subtotal:</b>		
<b>G. AD N-12 (IDDP):</b>			
Quantity	Item	Price	Cost
1770		@ \$300 LF	
1870		@ \$350 LF	
1970		@ \$400 LF	
2470		@ \$350 LF	
3070		@ \$330 LF	
3670		@ \$360 LF	
4270		@ \$600 LF	
4870		@ \$500 LF	
6070		@ \$1700 LF	
End Section			EA
	<b>Subtotal:</b>		
<b>H. Stormwater Management/BMP Facilities (see note 5)</b>			
Quantity	Item	Price	Cost
3,000	Encasement	@ \$28.00 CY	\$ 84,000
1,700	Encasement (Fill Material) **	@ \$28.00 CY	\$ 47,600
	<i>Subtotal Removal Replacing for Storm Drainage</i>		
<b>Storm Drainage Pipe (RCP, CMP, PVC, Raster):</b>			
		@	LF
		@	LE
<b>Storm Drainage Structures (E-7.1, M-1-1, M-1-2, etc.):</b>			
	Circular Filter System	@	EA
	Drainage Manhole	@	EA
	Cut-off Wall	@	EA
	Concrete Curb	@	LF
	End Wall	@	EA
	End Section	@	EA
	Trash Rack (\$300 per 12" increments)	@	EA
	Stormscope	@	EA
	Shedding Wall	@	EA
	BMP Design Protection Device	@	EA
	Retention/Overland spill	@	EA
	Infiltration Trench (limited cost)	@	EA
	Sand Filter (limited cost)	@	EA
	<b>Subtotal:</b>		<b>\$134,500</b>
<b>Subtotal for this page: \$134,500</b>			

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Land Development Division - City of Orange County

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Spraying & Mixing			
Quantity	Item	Price	Cost
	Sed. Fertilizer & Match (\$200 Min)	@ \$9.78 SY	
	Nut	@ \$6.39 SY	
	(Hydraulic Cam Comp. - 4" depth)	@ \$7.25 SY	
	Biluminous Concrete - 1" depth	@ \$8.97 SY	
	Rip Rock	@ \$6.93 SY	
	Concrete edge step	@ \$4.94 LF	
	Insulator Control Valve (EC-4)	\$110.00 TON	
	A37-Corner Aggregate	@ \$25.00 TON	
	Pavement Protection:		
	① High Chain Link Fence (W/gauge or less) including		
	braces, end caps and gates		
	② High Chain Link Fence (W/gauge or less) including		
	braces, end caps and gates		
	SRM Sign WATER RESISTANT (A/FIXT.)	@ \$700.00 EA	
	(Minimum ) 1 sign per facility.		
	Access Road		
		<b>Subtotal:</b>	
<b>B. Miscellaneous Drainage Items</b>			
Quantity	Item	Price	Cost
	Box Culvert	@ \$800.00 C/L LINE	
	Energy Dissipator	@ \$2,000.00	
	Wing Walls	@ \$400.00 C/L	
	Anchors	@ / EA	
Ditches:			
	Standard standard ditches (steel, terraced and mulch)	@ \$6.10 LF	
	"rock" ditches	@ \$2.85 LF	
	Perfor Ditcher	@ \$1.00 SF	
	Flyr Cloth Fabric & Gulsion Stone	@ \$1.00 SF	
<b>A,535</b>	Rip up	@ \$5.50 SF	<b>\$ 21,476</b>
	Crumbling+rip	@ \$4.50 SF	
	Paved Flare	@ \$200.00 SF	
	Flank of Drainage System	@ \$200.00 SF	
		<b>Subtotal:</b>	<b>\$ 32,616</b>
<b>16. CONSTRUCTION WITHIN THE RIGHT-OF-WAY AND FOREAREAS</b>			
A. Site Work			
Quantity	Item	Price	Cost
	Clear & Grub	@ \$10.00 AC	
	Excavation**	@ \$25.00 CY	
	Rock Excavations	@ \$25.00 CY	
	Gravel Stabilization Hydroseeding @ 2000psi/2000mm	@ \$5.00 SF	
	Slope Stake - 3" x 36" Metal, Minimum 30' between	@ \$9.78 SY	
	diameter 2" x 10' 3200 MM	@ \$10.00 SY	
	Slope Stake - Notches 2" x 10' 3200 MM	@ \$10.00 SY	
	Slope Slopes (Grading and Stabilization,	@ \$10.00 SY	
	with Iron Mesh, Netting, Ripstones, etc.)		
		<b>Subtotal:</b>	
		<b>Subtotal for this group:</b>	<b>\$ 32,476</b>

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<http://www.mcgraw-hill.com/construction/cost-database/>

D. Subgrade, Subbase and Base Course Items			
Quantity	Item	Price	Cost
For item subtotals for public use - identify quantities separately for each section (Use Page #)			
	Subgrade preparation	@ \$2.30/SY	
	Subbase A (3" min)		
	Aggregate (2 1/2" x 3/8")	@ \$2.00/SY per inch Depth	
	Wettable Concrete	@ \$2.00/SY per inch Depth	
	Reinforced Concrete Pavement	@ \$2.00/SY per inch Depth	
	Gravel Shoulder (C" Depth)	@ \$2.00/SY	
Underdrain:	CD-1	\$177.00/LF	
	CD-2	@ \$77.00/LF	
	CD-3	@ \$80.0/LF	
	CD-4	@ \$200.0/LF	
	soil Core Stabilization (4%)	@ \$49.88/SY (C" Depth)	
	Linear Stabilization (0%)	@ \$49.88/SY (C" Depth)	
	Concrete Treated Aggregate	@ \$49.88/SY per inch Depth	
		Subtotal:	
C. Subbase and Base Course Items			
Quantity	Item	Price	Cost
For private streets, travel lanes, and parking areas:			
	Aggregate (7-8")	@ \$2.00/SY per inch Depth	
	Wettable Concrete	@ \$2.00/SY per inch Depth	
	Reinforced Concrete Pavement	@ \$2.00/SY per inch Depth	
	Gravel Shoulder	@ \$2.00/SY (C" Depth)	
	Concrete Stabilization (4%)	@ \$20.88/SY (C" Depth)	
	Linear Stabilization (0%)	@ \$4.88/SY (C" Depth)	
		Subtotal:	
D. Entrances and Pipe Systems			
Quantity	Item	Price	Cost
DE-1	@ \$2.200/LA		
DE-2	@ \$1.800/LA		
DE-3	@ \$2.400/LA		
DE-4	@ \$2.800/LA		
PP-1 (1 ft)	\$1.00/LA		
PP-2 (2 - 5 ft)	@ \$2.200/LA		
PP-3 (6 ft)	@ \$3.300/LA		
PP-4 (7 - 8 ft)	@ \$3.500/LA		
PP-5 (9 - 10 ft)	@ \$3.700/LA		
PP-6 (11 - 12 ft)	@ \$3.900/LA		
PP-7 (13 - 14 ft)	@ \$4.100/LA		
PP-8 (15 - 16 ft)	@ \$4.300/LA		
PP-9 (17 - 18 ft)	@ \$4.500/LA		
PP-10 (19 - 20 ft)	@ \$4.700/LA		
PP-11 (21 - 22 ft)	@ \$4.900/LA		
PP-12 (23 - 24 ft)	@ \$5.100/LA		
PP-13 (25 - 26 ft)	@ \$5.300/LA		
PP-14 (27 - 28 ft)	@ \$5.500/LA		
PP-15 (29 - 30 ft)	@ \$5.700/LA		
PP-16 (31 - 32 ft)	@ \$5.900/LA		
PP-17 (33 - 34 ft)	@ \$6.100/LA		
PP-18 (35 - 36 ft)	@ \$6.300/LA		
PP-19 (37 - 38 ft)	@ \$6.500/LA		
PP-20 (39 - 40 ft)	@ \$6.700/LA		
PP-21 (41 - 42 ft)	@ \$6.900/LA		
PP-22 (43 - 44 ft)	@ \$7.100/LA		
PP-23 (45 - 46 ft)	@ \$7.300/LA		
PP-24 (47 - 48 ft)	@ \$7.500/LA		
PP-25 (49 - 50 ft)	@ \$7.700/LA		
PP-26 (51 - 52 ft)	@ \$7.900/LA		
PP-27 (53 - 54 ft)	@ \$8.100/LA		
PP-28 (55 - 56 ft)	@ \$8.300/LA		
PP-29 (57 - 58 ft)	@ \$8.500/LA		
PP-30 (59 - 60 ft)	@ \$8.700/LA		
PP-31 (61 - 62 ft)	@ \$8.900/LA		
PP-32 (63 - 64 ft)	@ \$9.100/LA		
PP-33 (65 - 66 ft)	@ \$9.300/LA		
PP-34 (67 - 68 ft)	@ \$9.500/LA		
PP-35 (69 - 70 ft)	@ \$9.700/LA		
PP-36 (71 - 72 ft)	@ \$9.900/LA		
PP-37 (73 - 74 ft)	@ \$10.100/LA		
PP-38 (75 - 76 ft)	@ \$10.300/LA		
PP-39 (77 - 78 ft)	@ \$10.500/LA		
PP-40 (79 - 80 ft)	@ \$10.700/LA		
PP-41 (81 - 82 ft)	@ \$10.900/LA		
PP-42 (83 - 84 ft)	@ \$11.100/LA		
PP-43 (85 - 86 ft)	@ \$11.300/LA		
PP-44 (87 - 88 ft)	@ \$11.500/LA		
PP-45 (89 - 90 ft)	@ \$11.700/LA		
PP-46 (91 - 92 ft)	@ \$11.900/LA		
PP-47 (93 - 94 ft)	@ \$12.100/LA		
PP-48 (95 - 96 ft)	@ \$12.300/LA		
PP-49 (97 - 98 ft)	@ \$12.500/LA		
PP-50 (99 - 100 ft)	@ \$12.700/LA		
PP-51 (101 - 102 ft)	@ \$12.900/LA		
PP-52 (103 - 104 ft)	@ \$13.100/LA		
PP-53 (105 - 106 ft)	@ \$13.300/LA		
PP-54 (107 - 108 ft)	@ \$13.500/LA		
PP-55 (109 - 110 ft)	@ \$13.700/LA		
PP-56 (111 - 112 ft)	@ \$13.900/LA		
PP-57 (			

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4. SANITARY SEWER & WATER LINE CONSTRUCTION			
WaterMain (Exclusive of the Hydrant)			
Quantity	Item	Price	Cost
4" DI DIP		@ \$41.12	
6" DI DIP		@ \$49.17	
8" DI DIP		@ \$72.13	
12" DI DIP		@ \$106.13	
16" DI DIP		@ \$170.13	
18" DI DIP		@ \$210.13	
4" or 6" RW Valve (with accessories)		@ \$580.14	
6" or 12" RW Valve (with accessories)		@ \$1,000.14	
10" or 24" RW Valve (with accessories)		@ \$1,500.14	
Tree-Wood Assembly		@ \$1,500.14	
Standard Meter/Cross & Appurtenances (each meter, handwheel assembly, and flow and service valve)		@ \$210.70A	
Water Main Appurtenances (7" meter & lug)		@ \$160.50B	
Water Main Bypass Assembly		@ \$2,500.0A	
Air Release Assembly		@ \$1,500.0A	
Lead In And Anchor System		@ \$7,000.0A	
	Subtotal:		
Sanitary Sewer Pipe Line (Exclusive of Manhole Installation)			
Quantity	Item	Price	Cost
25.00 lins 4" DI PPVM (Low Pressure Force Main System)		@ \$32.13	
8" DI PVC		@ \$61.12	
8" DI DIP		@ \$79.17	
10" DI PVC		@ \$86.12	
10" DI DIP		@ \$106.13	
12" DI PVC		@ \$119.12	
12" DI DIP		@ \$150.13	
16" DI PVC		@ \$170.13	
4 Dia. Sanitary Sewer Manhole		@ \$600.13	
5 Dia. Sanitary Sewer Manhole		@ \$850.13	
Sanitary Manhole Frame & Cover Assembly (including rainwater & chimney seal)		@ \$700.00	
Sanitary Manhole Frame & Cover Assembly (including chimney seal)		@ \$550.00	
Amendment of Manhole		@ \$25.13	
8" DI PVC Lateral (including clean-out stick)		@ \$25.13	
40" DI Lateral (including clean-out stick)		@ \$45.13	
6" DI PVC Lateral (including clean-out stick)		@ \$45.13	
6" DI DI Lateral (including clean-out stick)		@ \$45.13	
1.25 DI Flushing Station		@ \$75.00A	
Sewerage Air Receiver/Vacuum Breaker Assembly		@ \$35.00A	
Roof Capping		@ \$300.07	
Clean Pipe (200 gal. minimum)		@ \$4,000.0A	
	Subtotal:		
For size larger than 18", add \$4.00 per inch increase diameter.			
Total Construction Cost:		Subtotal for this page:	
		(\$29,126)	

5. MISCELLANEOUS COST			
A. Administrative Cost – 10% of the total construction cost, not to exceed \$50,000			
B. Inflation Cost – Compounded annually at 3.5% per year of the total Construction Cost			
Total Performance Bond Amount:			
6. LANDSCAPING ENDSHOW			
A. Deciduous Trees			
Quantity	Item	Price	Cost
	4" - 5"	@ \$80 EA	
	5" - 6"	@ \$70 EA	
	1" - 1 1/2" cal4" - 2"	@ \$165 EA	
	2" - 2 1/2" or 2 1/2" - 3"	@ \$250 EA	
	3" - 3 1/2" or 3 1/2" - 4"	@ \$350 EA	
B. Evergreen Trees			
Quantity	Item	Price	Cost
	8" - 5"	@ \$100 EA	
	5" - 6"	@ \$125 EA	
	6" - 7"	@ \$175 EA	
	7" - 8"	@ \$200 EA	
	8" - 10"	@ \$400 EA	
C. Shrubs			
Quantity	Item	Price	Cost
	18" - 24"	@ \$45 EA	
	24" - 30"	@ \$55 EA	
D. Referentative			
Quantity	Item	Price	Cost
	# of Acres	@ \$31,700 AC	
		Subtotal:	

**Subtotal for this page:**

Final Price \$50

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WinSta 1011-01-07

Environmental Services "Clearly Classified Costs" Price William, WA, 22192 791.791.0631, www.pgsenr.org/200

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# T PRICE CHECKLIST

Scale: NTS

PROJECT NAME: POSSUM POINT POWER STATION  
IMPROVEMENTS TO ASH PONDS ABC

PWC FILE NUMBER: TBD

PRINCE WILLIAM COUNTY, VIRGINIA  
DEPARTMENT OF PUBLIC WORKS  
ENVIRONMENTAL SERVICES DIVISION - WATERSHED BRANCH

COMMONWEALTH OF VIRGINIA  
 JONATHAN M. PITTMAN  
 Lic. No. 041420  
 PROFESSIONAL ENGINEER

DESIGN BY:	SEP
CHECKED BY:	JMP
DRAWN BY:	SEP
DATE:	OCTOBER 2014
SCALE:	NST
DRAWING NO:	PWC-02
SHEET NO:	16 of 16

DATE	DESIGNER	NO.	DESCRIPTION